## Figure 1: Alignment of SCS006 to ABA90222, AAB40530 and ENSP277300

```
     SCS0006      LTAAEQSAER AAMALARPGT PDPQALASVL LLLLWAPALS LLAGTVPSEP
     AAB40530     .......... .......... .......... .......... ..........
  5  ABA90222     .......... .......... .........:. .......... ..........
     ENSP277300   .......... ......`.... .........:. .......... ..........


     SCS0006      PSACASDPCA PGTECQATES GGYTCGPMEP RGCATQPCHH GALCVPQGPD
 10  AAB40530     .......... .......... .......... .......... ..........
     ABA90222     .......... .......... .......... .......... ......:...
     ENSP277300   ...CASDPCA PGTECQATES GGYTCGPMEP RGCATQPCHH GALCVPQGPD


 15  SCS0006      PNGFRCYCVP GFQGPRCELD IDECASRPCH HGATCRNLAD RYECHCPLGY
     AAB40530     .......... .......... ..:....... .......... ..........
     ABA90222     .......... .......... ..:....... .......... ..........
     ENSP277300   PTGFRCYCVP GFQGPRCELD IDECASRPCH HGATCRNLAD RYECHCPLGY


 20
     SCS0006      AGVTCEMEVD ECASAPCLHG GSCLDGVGSF RCVCAPGYGG TRCQLDLDEC
     AAB40530     .......... .......... ASCLEGLGSF RCLCWPGYSG ELCEVDEDEC
     ABA90222     .......... .......... ASCLEGLGSF RCLCWPGYSG ELCEVDEDEC
     ENSP277300   AGVTCEMEVD ECASAPCLHG GSCLDGVGSF RCVCAPGYGG TRCQLDLDEC
 25

     SCS0006      QSQPCAHGGT CHDLVNGFRC DCAGTGYEGT HCEREVLECA SAPCEHNASC
     AAB40530     ASSPCQHGGR CLQRSD.... ..P....... .....ALYGG VQAAFPGAFS
     ABA90222     ASSPCQHGGR CLQRSD.... ..P....... .....ALYGG VQAAFPGAFS
 30  ENSP277300   QSQPCAHGGT CHDLVNGFRC DCAGTGYEGT HCEREVLECA SAPCEHNASC


     SCS0006      LEGLGSFRCL CWPGYSGELC EVDEDECASS PCQHGGRCLQ RSDPALYGGV
     AAB40530     FRHAAGFLCH CPPGFEGADC GVEVDECASR PCLNGGHCQD LPN.......
 35  ABA90222     FRHAAGFLCH CPPGFEGADC GVEVDECASR PCLNGGHCQD LPN.......
     ENSP277300   LEGLGSFRCL CWPGYSGELC EVDEDECASS PCQHGGRCLQ RSDPALYGGV


     SCS0006      QAAFPGAFSF RHAAGFLCHC PPGFEGPTCE EDVDECLSDP CLHGGTCSDT
 40  AAB40530     .......... ....GFQCHC PDGYAGPTCE EDVDECLSDP CLHGGTCSDT
     ABA90222     .......... ....GFQCHC PDGYAGPTCE EDVDECLSDP CLHGGTCSDT
     ENSP277300   QAAFPGAFSF RHAAGFLCHC PPGFEGPTCE EDVDECLSDP CLHGGTCSDT


 45  SCS0006      VAGYICRCPE TWGGRDCSVQ LTGCQGHTCP LAATCIPIFE SGVHSYVCHC
     AAB40530     VAGYICRCPE TWGGRDCSVQ LTGCQGHTCP LAATCIPIFE SGVHSYVCHC
     ABA90222     VAGYICRCPE TWGGRDCSVQ LTGCQGHTCP LAATCIPIFE SGVHSYVCHC
     ENSP277300   VAGYICRCPE TWGGRDCSVQ LTGCQGHTCP LAATCIPIFE SGVHSYVCHC

 50
     SCS0006      PPGTHGPFCG QNTTFSVMAG SPIQASVPAG GPLGLALRFR TTLPAGTLAT
     AAB40530     PPGTHGPFCG QNTTFSVMAG SPIQASVPAG GPLGLALRFR TTLPAGTLAT
     ABA90222     PPGTHGPFCG QNTTFSVMAG SPIQASVPAG GPLGLALRFR TTLPAGTLAT
     ENSP277300   PPGTHGPFCG QNTTFSVMAG SPIQASVPAG GPLGLALRFR TTLPAGTLAT
 55

     SCS0006      RNDTKESLEL ALVAATLQAT LWSYSTTVLV LRLPDLALND GHWHQVEVVL
     AAB40530     RNDTKES... .......... .......... .......... ..........
     ABA90222     RNDTKESLEL ALVAATLQAT LWSYSTTVLV LRLPDLA... ..........
 60  ENSP277300   RNDTKESLEL ALVAATLQAT LWSYSTTVLV LRLPDLALND GHWHQVEVVL


     SCS0006      HLATLELRLW HEGCPARLCV ASGPVALAST ASATPLPAGI SSAQLGDATF
     AAB40530     .......... .......... .......... .......... ..........
 65  ABA90222     .......... .......... .......... .......... ..........
     ENSP277300   HLATLELRLW HEGCPARLCV ASGPVALAST ASATPLPAGI SSAQLGDATF


     SCS0006      AGCLQDVRVD GHLLLPEDLG ENVLLGCERR EQCRPLPCVH GGSCVDLWTH
```

```
AAB40530      ..........  ..........  ..........  ..........  ..........
ABA90222      ..........  ..........  ..........  ..........  ..........
ENSP277300    AGCLQDVRVD  GHLLLPEDLG  ENVLLGCERR  EQCRPLPCVH  GGSCVDLWTH
```

5

```
      SCS0006      FRCDCARPHR GPTCADEIPA ATFGLGGAPS SASFLLQELP GPNLTVSFLL
      AAB40530     .......... .......... .......... .......... ..........
      ABA90222     .......... .......... .......... .......... ..........
      ENSP277300   FRCDCARPHR GPTCADEIPA ATFGLGGAPS SASFLLQELP GPNLTVSFLL
 5

      SCS0006      RTRESAGLLL QFANDSAAGL TVFLSEGRIR AEAPGSPAVV LPGRWDDGLR
      AAB40530     .......... .......... .......... .......... ..........
      ABA90222     .......... .......... .......... .......... ..........
10    ENSP277300   RTRESAGLLL QFANDSAAGL TVFLSEGRIR AEVPGSPAVV LPGRWDDGLR


      SCS0006      HLVMLSFGPD QLQDLGQHVH VGGRLLAADS QPWGGPFRGC LQDLRLDGCH
      AAB40530     .......... .......... .......... .......... ..........
15    ABA90222     .......... .......... .......... .......... ..........
      ENSP277300   HLVMLSFGPD QLQDLGQHVH VGGRLLAADS QPWGGPFRGC LQDLRLDGCH


      SCS0006      LPFFPLPLDN SSQPSELGGR QSWNLTAGCV SEDMCSPDPC FNGGTCLVTW
20    AAB40530     .......... .......... .......... .......... ..........
      ABA90222     .......... .......... .......... .......... ..........
      ENSP277300   LPFFPLPLDN SSQPSELGGR QSWNLTAGCV SEDMCSPDPC FNGGTCLVTW


25    SCS0006      NDFHCTCPAN FTGPTCAQQL WCPGQPCLPP ATCEEVPDGF VCVAEATFRE
      AAB40530     .......... .......... .......... .......... ..........
      ABA90222     .......... .......... .......... .......... ..........
      ENSP277300   NDFHCTCPAN FTGPTCAQQL WCPGQPCLPP ATCEEVPDGF VCVAEATFRE

30
      SCS0006      GPPAAFSGHN ASSGRLLGGL SLAFRTRDSE AWLLRAAAGA LEGVWLAVRN
      AAB40530     .......... .......... .......... .......... ..........
      ABA90222     .......... .......... .......... .......... ..........
      ENSP277300   GPPAAFSGHN ASSGRLLGGL SLAFRTRDSE AWLLRAAAGA LEGVWLAVRN
35

      SCS0006      GSLAGGVRGG HGLPGAVLPI PGPRVADGAW HRVRLAMERP AAATSRWLLW
      AAB40530     .......... .......... .......... .......... ..........
      ABA90222     .......... .......... .......... .......... ..........
40    ENSP277300   GSLAGGVRGG HGLPGAVLPI PGPRVADGAW HRVRLAMERP AATTSRWLLW


      SCS0006      LDGAATPVAL RGLASDLGFL QGPGAVRILL AENFTGCLG. ..........
      AAB40530     .......... .......... .......... .......... ..........
45    ABA90222     .......... .......... .......... .......... ..........
      ENSP277300   LDGAATPVAL RGLASDLGFL QGPGAVRILL AENFTGCLGR VALGGLPLPL


      SCS0006      .......... ..RHFASWPG TPAPILGCRG APVCAPSPCL HDGACRDLFD
50    AAB40530     .......... .......... .......... .......... ..........
      ABA90222     .......... .......... .......... .......... ..........
      ENSP277300   ARPRPGAAPG AREHFASWPG TPAPILGCRG APVCAPSPCL HDGACRDLFD


55    SCS0006      AFACACGPGW EGPRCEAHVD PCHSAPCARG RCHTHPDGRF ECRCPPGFGG
      AAB40530     .......... .......... .......... .......... ..........
      ABA90222     .......... .......... .......... .......... ..........
      ENSP277300   AFACACGPGW EGPRCEAHVD PCHSAPCARG RCHTHPDGRF ECRCPPGFGG

60
      SCS0006      PRCR...... .......... .......... ....LPVPSK ECSLNVTCLD
      AAB40530     .......... .......... .......... .......... ..........
      ABA90222     .......... .......... .......... .......... ..........
      ENSP277300   PRCRTQAQVA HGHSAGEGRS QVSCTHSSLC SLPRLPVPSK ECSLNVTCLD
65

      SCS0006      GSPCEGGSPA ANCSCLEGLA GQRCQVPTLP CEANPCLNGG TCRAAGGVSE
      AAB40530     .......... .......... .......... .......... ..........
      ABA90222     .......... .......... .......... .......... ..........
70    ENSP277300   GSPCEGGSPA ANCSCLEGLA GQRCQVPTLP CEANPCLNGG TCRAAGGVSE
```

```
        SCS0006      CICNARFSGQ FCEVAKGLPL PLPFPLLEVA VPAACACLLL LLLGLLSGIL
        AAB40530     .......... .......... .......... .......... ..........
        ABA90222     .......... .......... .......... .......... ..........
  5     ENSP277300   CICNARFSGQ FCEVAVS... .......... .......... ..........


        SCS0006      AARKRRQSEG TYSPSQQEVA GARLEMDSVL KVPPEERLI
        AAB40530     .......... .......... .......... .........
  10    ABA90222     .......... .......... .......... .........
        ENSP277300   .......... .......... .......... .........
```

## Figure 2: Alignment of SCS006 to Notch-2 preprotein (NP_077719)

```
 5   NOTCH_2_PR   MPALRPALLW ALLALWLCCA APAHALQCRD GYEPCVNEG M CVTYHNGTGY
     SCS0006      .......... .......... .......... .......... ..........

10   NOTCH_2_PR   CKCPEGFLGE YCQHRDPCEK NRCQNGGTCV AQAMLGKATC RCASGFTGED
     SCS0006      .......... .......... .......... .......... LTAAEQSAER

     NOTCH_2_PR   CQYSTS HPCF VSRPCLNGGT CHMLSRDTYE CTCQVGFTGK ECQWTDACLS
15   SCS0006      AAMALARPGT PD........ ......·.... .......... ..........

     NOTCH_2_PR   HPCANGSTCT TVANQFSCKC LTGFTGQKCE TDVNECDIPG HCQHGGTCLN
     SCS0006      .PQALASVLL LLLWAPALSL LAGTVPSE.. ........P. ..........

20   NOTCH_2_PR   LPGSYQCQCP QGFTGQYCDS LYVPCAPSPC VNGGTCRQTG DFTFECNCLP
     SCS0006      .........P S......... ...ACASDPC APGTECQATE ..........

     NOTCH_2_PR   GFEGSTCERN IDDCPNHRCQ NGGVCVDGVN TYNCRCPPQW TGQFCTEDVD
25   SCS0006      .......... .......... .......... .......... ..........

     NOTCH_2_PR   ECLLQPNACQ NGGTCANRNG GYGCVCVNGW SGDDCSENID DCAFASCTPG
30   SCS0006      .......... ........SG GYTCGP.... .......... ..........

     NOTCH_2_PR   STCIDRVASF SCMCPEGKAG LLCHLDDACI SNPCHKGALC  DTNPLNGQYI
     SCS0006      .......... ..MEPRG... .........CA TQPCHHGALC VP........

35   NOTCH_2_PR   CTCPQGYKGA DCTEDVDECA MANSNPCEHA GKCVNTDG AF HCECLKGYAG
     SCS0006      ....QGPD.. .......... ...PN..... ........ GF RCYCVPGFQG

     NOTCH_2_PR   PRCEMDINEC HSDPCQNDAT CLDKIGGFTC LCMPGFKGVH CELEINECQS
40   SCS0006      PRCELDIDEC ASRPCHHGAT CRNLADRYEC HCPLGYAGVT CEMEVDECAS

     NOTCH_2_PR   NPCVNNGQCV DKVNRFQCLC PPGFTGPVCQ IDIDDCSSTP CLNGAKCIDH
45   SCS0006      APCLHGGSCL DGVGSFRCVC APGYGGTRCQ LDLDECQSQP. CA HGGTCHDL

     NOTCH_2_PR   PNGYECQCAT GFTGVLCEEN IDNCDPDPCH HGQCQDGIDS YTCICNPGYM
     SCS0006      VNGFRCDCAG .......... .......... .......... ......TGYE
50
     NOTCH_2_PR   GAICSDQIDE CYSSPCLNDG RCIDLVNGYQ CNCQPGTSGV NCEINFDDCA
     SCS0006      GTHCEREVLE CASAPCEHN. .......... .......... ..........

55   NOTCH_2_PR   SNPCIHGICM DGINRYSCVC SPGFTGQRCN IDIDECASNP CRKGATCING
     SCS0006      ......ASCL EGLGSFRCLC WPGYSGELCE VDEDECASSP CQHGGRCLQ.

     NOTCH_2_PR   VNGFRCICPE GPHHPSCYSQ VNECLSNPCI HGNCTGGLSG YK CLCDAGWV
60   SCS0006      .......... ...R...... .....SDPAL YGGVQAAFPG AFSFRHA...
```

```
        NOTCH_2_PR    GINCEVDKNE  CLSNPCQNGG  TCDNLVNGYR  CTCKKGFKGY  NCQVNIDECA
        SCS0006       ..........  ..........  ......AGFL  CHCPPGFEGP  TCEEDVDECL


    5   NOTCH_2_PR    SNPCLNQGTC  FDDISGYTCH  CVLPYTGKNC  QTVLAPCSPN  PCENAAVCKE
        SCS0006       SDPCLHGGTC  SDTVAGYICR  CPETWGGRDC  SVQLTGCQGH  TCPLAATC..


        NOTCH_2_PR    SPNFESYTCL  CAPGWQGQRC  TIDIDECISK  PCMNHGLCHN  TQGSYMCECP
   10   SCS0006       IPIFES....  ....G.....  ..........  ..........  .VHS  YVCHCP


        NOTCH_2_PR    PGFSGMDCEE  DIDDCLANPC  QNGGSCMDGV  NTFSCLCLPG  FTGDKCQTDM
        SCS0006       PGTHGPFCGQ  NTTFSVMAGS  PIQASVPAGG  ........PL  GLALRFRTTL
   15

        NOTCH_2_PR    NECLSEPCKN  GGTCSDYVNS  YTCKCQAGFD  GVHCENNINE  CTESSCFNGG
        SCS0006       ..........  ..........  ........PA  GTLATRNDTK  ESLELALVAA

   20
        NOTCH_2_PR    TCVDGINSFS  CLCPVGFTGS  FCLHEINECS  SHPCLNEGTC  VDGLGTYRCS
        SCS0006       TLQATLWSYS  TTVLVLRLPD  LALNDGHWHQ  VEVVLHLATL  ELRLWHEGCP


   25   NOTCH_2_PR    CPLGYTGKNC  QTLVNLCSRS  PCKNKGTCVQ  KKAESQCLCP  SGWA  GAYCDV
        SCS0006       ARL.......  ..........  .CVASGPVAL  ASTASATPLP  AGISSAQLGD


        NOTCH_2_PR    PNVSCDIAAS  RRGVLVEHLC  QHSGVCINAG  NTHYCQCPLG  YTGSYCEEQL
   30   SCS0006       ATFAGCLQDV  R.......VD  GHLLLPEDLG  ENVLLGCER.  .........R


        NOTCH_2_PR    DECASNPCQH  G ATCSDFIGG  YRCECVPGYQ  GVNCEYEVDE  CQNQPCQNGG
        SCS0006       EQCRPLPCVH  GGSCVDLWTH  FRCDCARPHR  GPTCADEIPA  ATFGLGGAPS
   35

        NOTCH_2_PR    TCIDLVNHFK  CSCPPGTRGL  LCEENIDDCA  RGPHCLNGGQ  CMDRIGGYSC
        SCS0006       SASFLLQELP  GPNLTVSFLL  RTRESAGLLL  QFANDSAAGL  TVFLSE  GRIR

   40
        NOTCH_2_PR    RCLPGFAGER  CEGDINECLS·NPCSSEGSLD  CIQLTNDYLC  VCRSAFTGRH
        SCS0006       AEAPGSPAVV  LPGRWDDGLR  HLVMLSFGPD  QLQDLGQHVH  VGGRLLA...


   45   NOTCH_2_PR    CETFVDVCPQ  MPCLNGGTCA  VASNMPDGFI  CRCPPGFSGA  RCQSSCGQVK
        SCS0006       ....ADSQPW  GGP FRG....  ...CLQDLRL  DGCHLPFFPL  PLDNSS.QPS


        NOTCH_2_PR    CRKGEQCVHT  ASGPRCFCPS  PRDCESGCAS  SPCQHGGSCH  PQRQPPYYSC
   50   SCS0006       ELGGRQSWNL  TAG....CVS  ....EDMCSP  DPCFNGGTCL  VTWN..DFHC


        NOTCH_2_PR    QCAPPFSGSR  CELYTAPPST  PPATCLSQYC  ADKARDGVCD  EACNSH  ACQW
        SCS0006       TCPANFTGPT  CAQQLWCPGQ  P........  ..........  ..........
   55

        NOTCH_2_PR    DGGDCSLTME  NPWANCSSPL  PCWDYINNQC  DELCNTVECL  FDNFECQGNS
        SCS0006       ..........  .....CLPPA  TCEEVP....  ..........  ..........

   60
        NOTCH_2_PR    KTCKYDKYCA  DHF KDNHCDQ  GCNSEECGWD  GLDCAADQPE  NLAEGTLVIV
        SCS0006       ..........  ..........  .........D  GFVCVAEAT.  .FREG.....
```

```
     NOTCH_2_PR    VLMPPEQLLQ DARSFLRALG TLLHTNLRIK RDSQGELMVY PYYGEKSAAM
     SCS0006       ...PPAAFSG HNASSGRLLG .GLSLAFRTR .DSE...... .AWLLRAA AG

 5   NOTCH_2_PR    KKQRMTRRSL PGEQEQEVAG SKVFLEIDNR QCVQDSDHCF KNTDAAAALL
     SCS0006       .......AL EG........ ..VWLAVRN. .......... G..SLAGGVR

10   NOTCH_2_PR    ASHAIQGTLS YPLVSVVSES LTPERTQLLY LLAVAVVIIL FIILLGVIMA
     SCS0006       GGHGLPG... ..... ..... .......... .......... .....AVLPI

     NOTCH_2_PR    KRKRKHGSLW LPEGFTLRRD ASNHKRREPV GQDAVGLKNL SVQVSEANLI
15   SCS0006       PGPRVADGAW HRVRLAMERP AAATSR.... .......... ..........

     NOTCH_2_PR    GTGTSEHWVD DEGPQPKKVK AEDEALLSEE DDPIDRRPWT QQHLEAAD IR
     SCS0006       ....WLLWLD G......... .......... .......... ..........
20

     NOTCH_2_PR    RTPSLALTPP QAEQEVDVLD VNVRGPDGCT PLMLASLRGG SSDLSDEDED
     SCS0006       .....AATP. .......... .......... ....VALRGL ASDLG.....

25   NOTCH_2_PR    AEDSSANIIT DLVYQ GASLQ AQTDRTGEMA LHLAARYSRA DAAKRLLDAG
     SCS0006       .......... ..FLQGP... .......... .......... ..........

30   NOTCH_2_PR    ADANAQDNMG RCPLHAAVAA DAQGVFQILI RNRVTDLDAR MNDGTTPLIL
     SCS0006       .......... .......... ...GAVRILL AENFTGCLGR H.........

     NOTCH_2_PR    AARLAVEGMV AELINCQADV NAVDDHGKSA LHWAAAVNNV EATLLLLKNG
35   SCS0006       ..FASWPGTP APILGCRGAP .......... .........V CAPSPCLHDG

     NOTCH_2_PR    ANRDMQDNKE ETPLFLAARE GSYEAAKILL DHFANRDITD HMDRLPRDVA
     SCS0006       ACRDLFD... ...AFAC ACG PGWEGPR... ....CEAHVD PCHSAPCARG
40

     NOTCH_2_PR    RDRMHHDIVR LLDEYNVTPS PPGTVLTSAL SPVICGPNRS FLSLKHTPMG
     SCS0006       RCHTHPDGR. .....FECRC PPG....... ...FGGP... ..........

45   NOTCH_2_PR    KKSRRPSAKS TMPTSLPNLA KEAKDAKGSR RKKSLSEKVQ LSESSVTLSP
     SCS0006       .RCRLP.... ......VP... .......... .....SKECS LNVTCLDGSP

50   NOTCH_2_PR    VDSLESPHTY VSDTTSSPMI TSPGILQASP NPMLATAAPP APVHAQHALS
     SCS0006       CE........ ....GGSPAA NCSCLEGLAG ...QRCQVPT LPCEANPCLN

     NOTCH_2_PR    FSNLHEMQPL AHGASTV LPS VSQLLSHHHI VSPGSGSAGS LSRLHPVPVP
55   SCS0006       G......... ..GTCRAAGG VSECICNARF S....GQFCE VAKGLPLPLP

     NOTCH_2_PR    ADWMNRMEVN ETQYNEMFGM VLAPAEGTHP GIAPQSRPPE GKHITTPREP
     SCS0006       ......FPLL EVAVPAACAC LLLLLLGLLS GILAARK... .......RR.
60

     NOTCH_2_PR    LPPIVTFQLI PKGSIAQPAG APQPQSTCPP AVAGPLPTMY QIPEMARLPS
     SCS0006       .......... ......QSEG TYSPSQQEVA GARLEMDSVL KVPPEERLI.
```

```
      NOTCH_2_PR    VAFPTAMMPQ QDGQVAQTIL PAYHPFPASV GKYPTPPSQH SYASSNAAER
      SCS0006       .......... .......... . .......... .......... ..........
  5

      NOTCH_2_PR    TPSHSGHLQG EHPYLTPSPE SPDQWSSSSP HSASDWSDVT TSPTPGGAGG
      SCS0006       .......... .......... .......... .......... ..........

 10
      NOTCH_2_PR    GQRGPGTHMS EPPHNNMQVY A
      SCS0006       .......... ..... ..... .
```